

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-12. (cancelled)

13. (previously presented) A process for the rapid prototyping by sintering in solid phase, with a laser, of a powder or a mixture of powders, comprising the steps of:

1/ obtaining a series of digitized superposed sections of an object to be produced, from a three-dimensional representation of said object;

2/ spreading the powder or mixture of powders in the form of a thin layer;

3/ heating the layer at a temperature near the sintering temperature in solid phase of said powder or said mixture of powders;

4/ bringing the heated layer to the solid phase sintering temperature to create grain joints between particles of said powder or said mixture of powders by sweeping with a laser beam said layer such that a selected portion of the powder, which corresponds to one of the digitized sections of the object to be produced, is sintered in solid phase by the supplemental energy supplied by the laser; and

repeating steps 2 to 4 while maintaining said heating until all the digitized superposed sections of the object to be produced are obtained.

14. (previously presented) The process according to claim 13, wherein the powder or mixture of powders consists of ceramic material.

15. (previously presented) The process according to claim 14, wherein the powder or mixture of powders is heated and held at a temperature of the order of 300°C to 900°C.

16. (previously presented) The process according to claim 14, wherein the laser comprises a pulsed YAG laser having a wavelength of emitted radiation near infrared.

17-30. (cancelled)